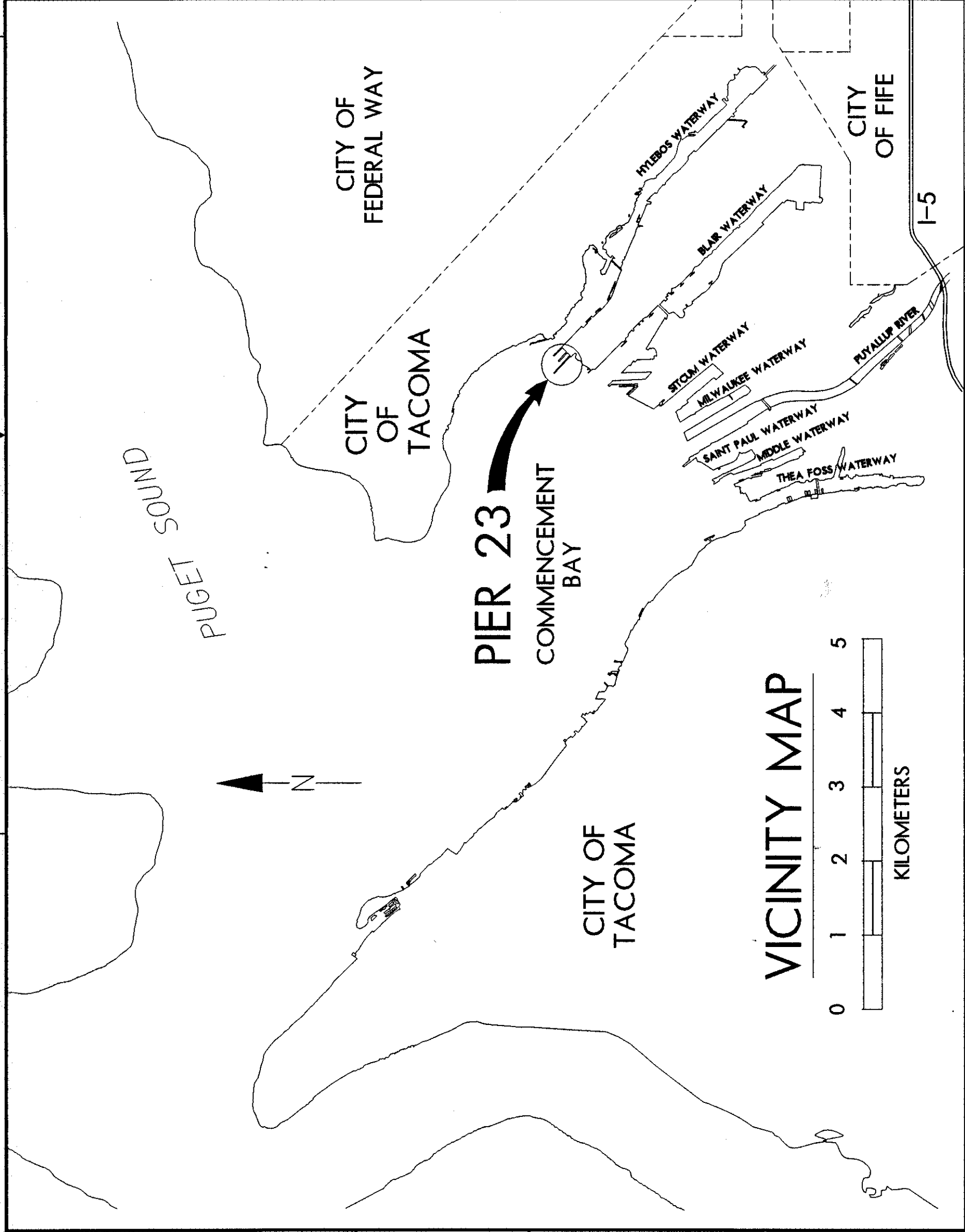


Appendix A

Design Drawings



REVISIONS			DATE	BY
SYMBOL	ZONE	DESCRIPTION		

NOTES:

- 1. JURISDICTIONAL BOUNDARIES ARE APPROXIMATE.
- 2. SEE PLATE S-1 FOR TIMBER PER PLAN.
- 3. SEE PLATE S-2 FOR TYPICAL PRIMARY BENT ELEVATION.

REDUCED TO 50% OF FULL SIZE

U.S. ARMY ENGINEER DISTRICT, SEATTLE
CORPS OF ENGINEERS
SEATTLE, WASHINGTON

PIER 23 USARC / OMS / MARINE AMSA

TIMBER PIER REHABILITATION - VICINITY MAP

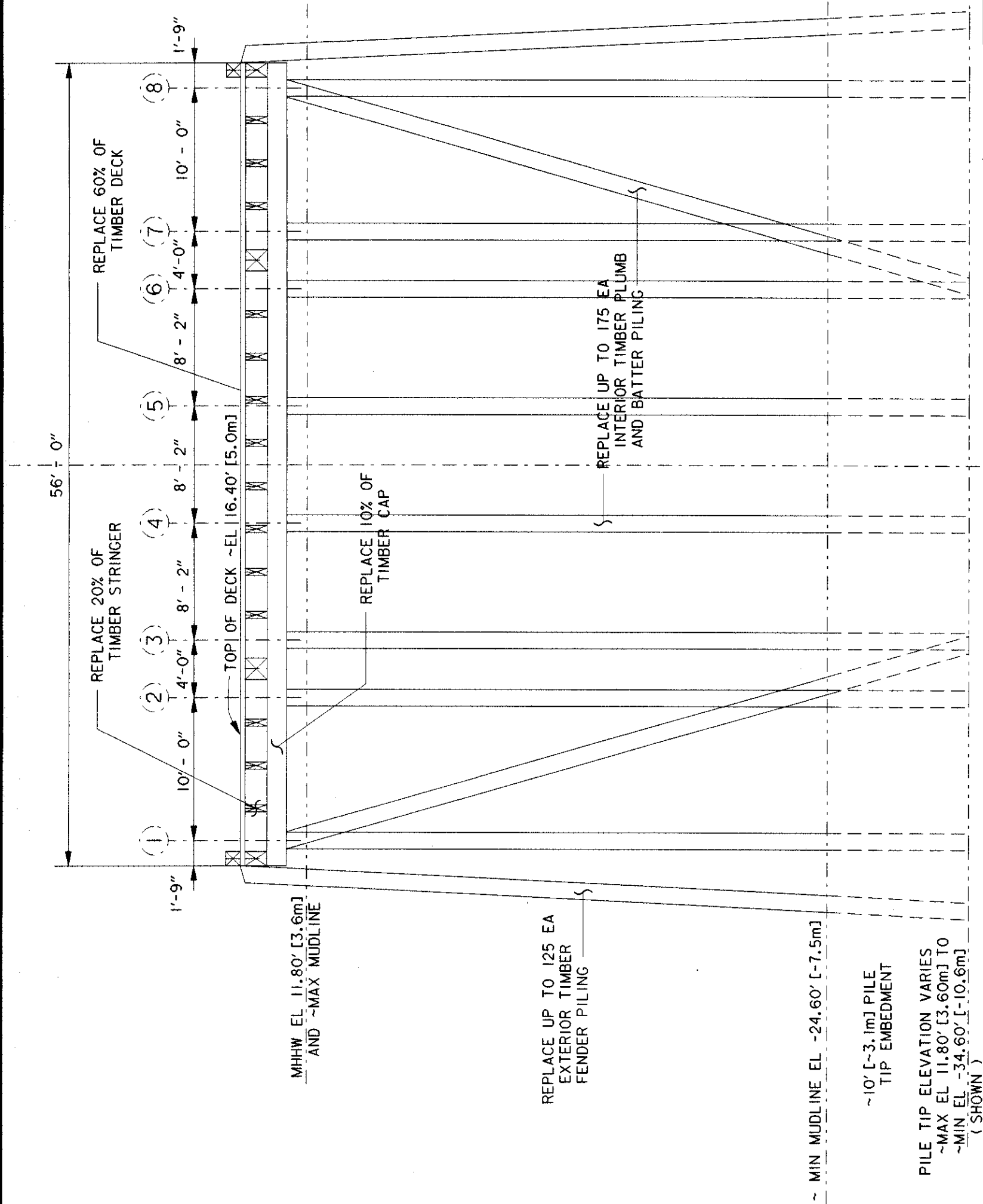
COMMENCEMENT BAY

PORT OF TACOMA

WASHINGTON

SIZE	DATE	FILE NO.	DATE	PLATE
D	04-JUL-15	12s/171-40-109	04JUL15	G-1

DRN. J. RYAN
CHK. A. KINNEY
SHEET 1 of 3



TYPICAL PRIMARY BENT ELEVATION

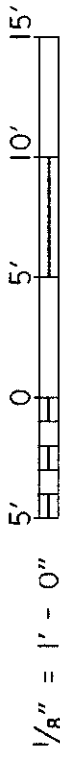
SCALE: 1" = 1' - 0"

NWS FINAL
15 JUL 04

DESIGN FILE: 104strforpierforcedb.dgn
DATE AND TIME PLOTTED: 15-JUL-2004 13:33

NOTES:

1. THERE ARE 51 EA PRIMARY BENTS AS SHOWN SPACED AT 12 FEET ON CENTER.
2. THERE ARE 50 EA SECONDARY BENTS [NOT SHOWN] LOCATED MIDWAY BETWEEN THE PRIMARY BENTS TO HELP SUPPORT THE CRANE RAILS. THE SECONDARY BENTS CONSIST OF A PILE CAP AND PILING ALONG GRID LINES 2, 3, 6 AND 7.
3. TIMBER PILING ARE 14-INCH DIAMETER AND VARY IN LENGTH BETWEEN 12 FEET AND 48 FEET LONG. TIMBER CAPS ARE 14 x 16'S. PRIMARY BENT LENGTH IS 56 FEET AND SECONDARY BENT LENGTH IS 36 FEET. TIMBER STRINGERS ARE 6 x 20'S x 12 FEET LONG. TIMBER DECK IS 4 x 12'S x STAGGERED LENGTHS.
4. INTERIOR TIMBER PILES WILL BE ACZA-TREATED. EXTERIOR TIMBER FENDER PILES WILL BE UNTREATED.



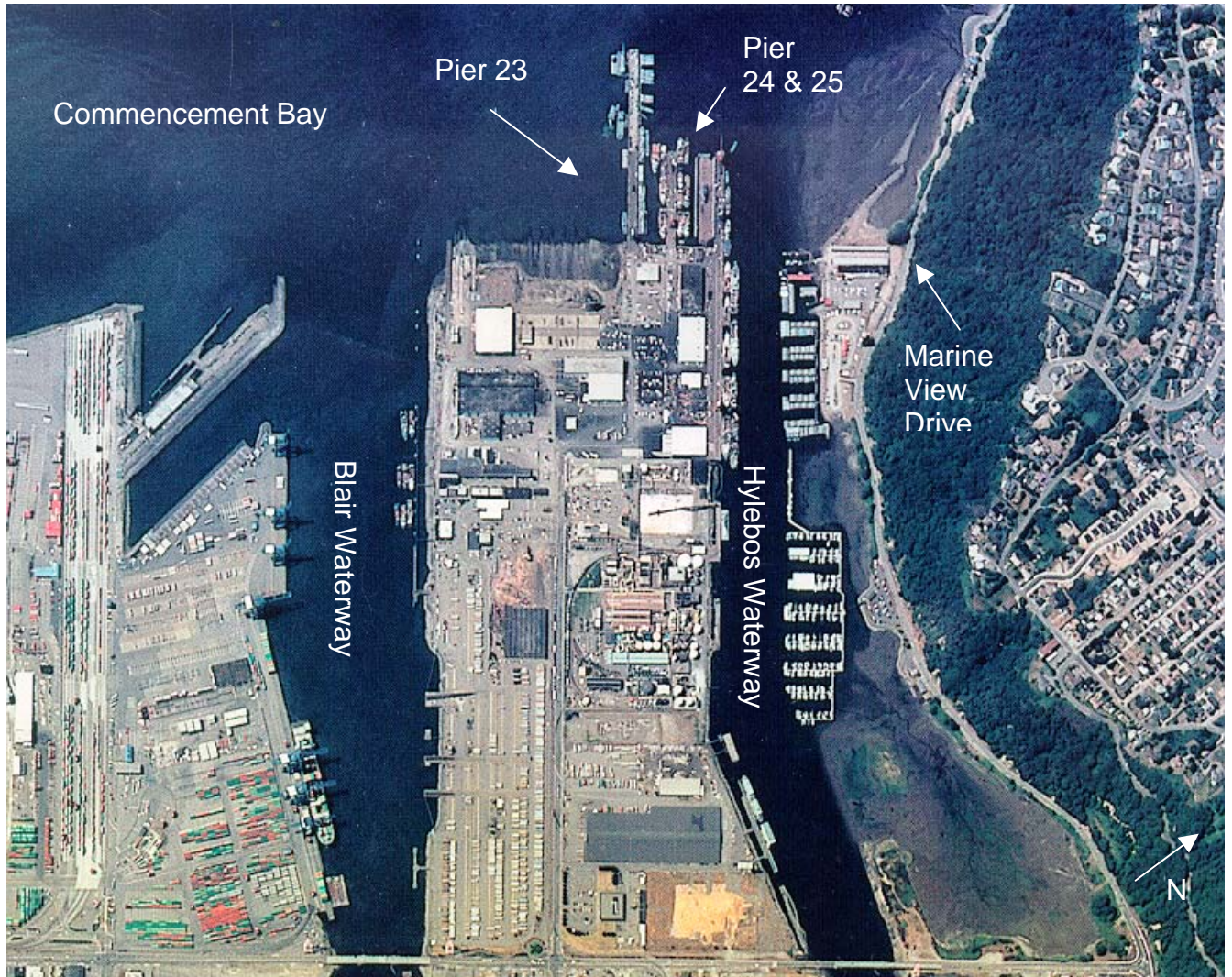
REDUCED TO 50% OF FULL SIZE

U.S. ARMY ENGINEER DISTRICT, SEATTLE CORPS OF ENGINEERS SEATTLE, WASHINGTON	
PIER 23 USARC / OMS / MARINE AMSA	
TIMBER PIER REHABILITATION - TYPICAL PRIMARY BENT ELEVATION	
PORT OF TACOMA	
COMMITMENT BAY	WASHINGTON
INVESTIGATION NO. W-2004-0027	DATE 04 JUL 05
SIZE D	FILE NO. T12s/171-40-109
DESIGNER J. RYAN	CHECKER A. KINNEY
SHEET 3 OF 3	PLATE S-2

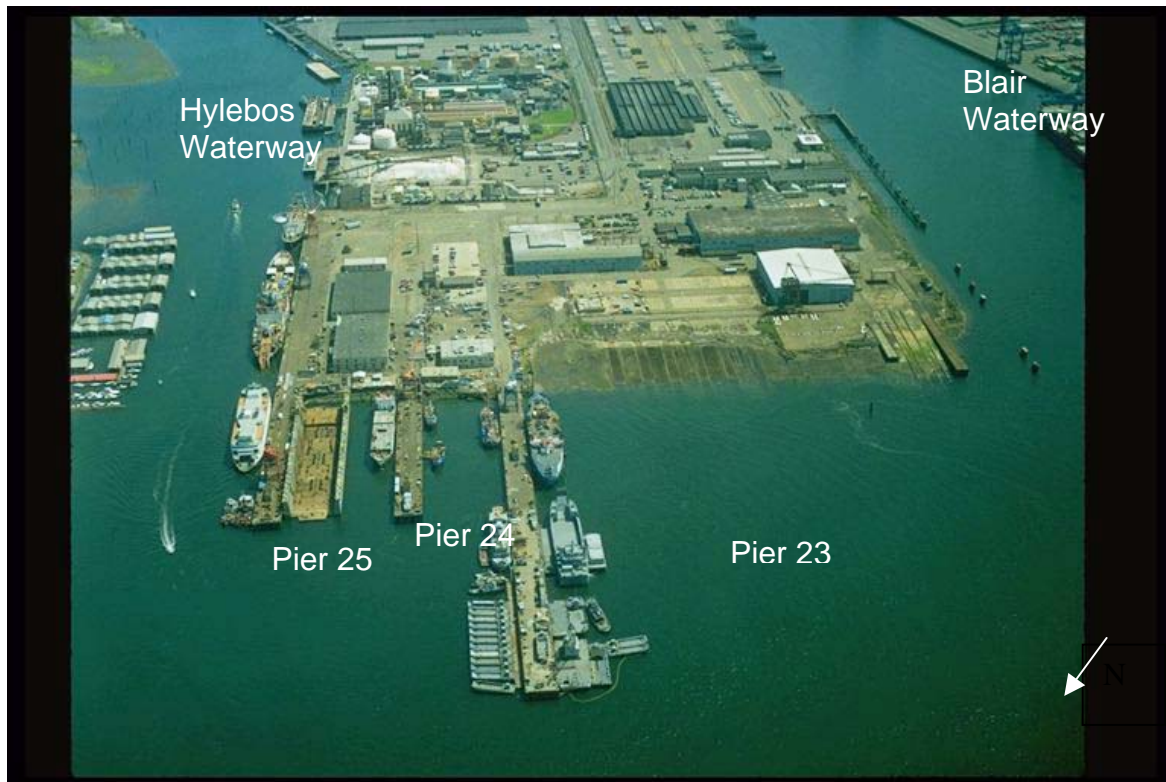
Appendix B

Photographs of the Project Site

Appendix B
Photographs of the Project Site



Photograph 1. Aerial view of the Pier 23 property



Photograph 2. Aerial view of the Pier 23 property (1992)



Photograph 3. View of timber section of Pier 23 and new Reserve Center buildings under construction (2003)



Photograph 4. View of timber and concrete sections of Pier 23



Photograph 5. Ships moored at Pier 23 (left) and Pier 24 (right)



Photograph 6. Barges and crane moored at Pier 23



Photograph 7. Barge drifted under pier due to lack of fender piling (2004)



Photograph 8. Damaged decking (2004)

Appendix C

Regulatory Approvals

RECEIVED
AUG 18 2004
REGULATORY



UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Northwest Region
7600 Sand Point Way N.E., Bldg. 1
Seattle, WA 98115

NMFS Tracking No.:
2004/00848

August 11, 2004

Stephen Rivera
Department of the Army
Headquarters 70th Regional Support Command
Fort Lawton, WA 98199-1015

RE: Endangered Species Act Section 7 Informal Consultation and Magnuson-Stevens Fishery Conservation and Management Act Essential Fish Habitat Consultation for the U.S. Army Reserve Pier 23 Piling Replacement and Pier Repair Project, Commencement Bay, Pierce County, Washington HUC 17110019, Puget Sound.

Dear Mr. Rivera:

This correspondence is in response to your request for consultation under the Endangered Species Act (ESA). Additionally, this letter serves to meet the requirements for consultation under the Magnuson-Stevens Fishery Conservation and Management Act (MSA §305(b)).

Endangered Species Act

NOAA's National Marine Fisheries Service (NOAA Fisheries) has reviewed your August 2, 2004 request for concurrence with your determination of "may affect, not likely to adversely affect" for Puget Sound (PS) chinook salmon which are ESA threatened. This consultation with the Department of the Army (Army) is conducted under section 7(a)(2) of the ESA, and its implementing regulations, 50 CFR Part 402.

According to the Biological Evaluation (BE), the applicant proposes to repair 600 feet of a wooden portion of Pier 23 in Commencement Bay, Washington. Approximately 530 creosote treated pilings will be removed and replaced with ACZA treated pilings for structural and mooring bollards and with untreated wood for fender piling systems. Out of water work includes encapsulating the mooring bollards with concrete in line with the deck surface and replacing pier decking and stringers with ACZA treated lumber. As part of prior approved projects, the Army Reserve is taking several steps to improve degraded baseline situations by improving stormwater systems and rehabilitating the shoreline.

NOAA Fisheries concurs with your determination of "may affect, not likely to adversely affect," to PS chinook, because of the minimization measures provided in the BE: (1) the project will be done when juvenile salmon are least likely to be present; (2) approximately 530 creosote-treated pilings will be permanently removed from the environment; and (3) Best Management Practices (BMPs) will be employed to reduce the potential for construction related activities to affect aquatic species and their habitat.



Printed on Recycled Paper



This concludes informal consultation on this proposed action in accordance with 50 CFR 402.14(b)(1). The Army must reanalyze this ESA consultation if: (1) new information reveals effects of the action that may affect listed species in a way not previously considered: (2) new information reveals the action causes an effect to listed species that was not previously considered: or (3) a new species is listed or critical habitat designated that may be affected by the identified actions.

Magnuson-Stevens Fishery Conservation and Management Act

Federal agencies are required, under §305(b)(20) of the Magnuson-Stevens Fishery Conservation and Management Act (MSA) and its implementing regulations (50 CFR 600 Subpart K), to consult with NOAA Fisheries regarding actions that are authorized, funded, or undertaken by that agency that may adversely affect Essential Fish Habitat (EFH). The MSA (§3) defines EFH as "those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity." If an action would adversely affect EFH, NOAA Fisheries is required to provide the Federal action agency with EFH conservation recommendations (MSA §305(b)(4)(A)). This consultation is based, in part, on the information provided by the Federal agency and descriptions of EFH for Pacific coast groundfish, coastal pelagic species, and Pacific salmon contained in the Fishery Management Plans developed by the Pacific Fishery Management Council and approved by the Secretary of Commerce.

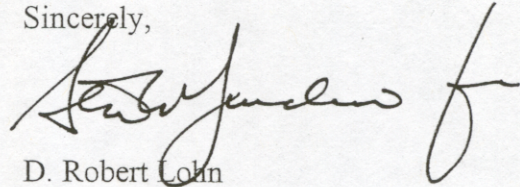
The proposed action and action area are described in the BE submitted by the Army. The project area includes habitat, which has been designated as EFH for various life stages of 46 species of groundfish, four species of coastal pelagics, and three species of Pacific salmon (Table 1, Enclosure).

EFH Conservation Recommendations: Because the conservation measures that the Army included as part of the proposed action to address ESA concerns are also adequate to avoid, minimize, or otherwise offset potential adverse impacts to the EFH of the species in Table 1, conservation recommendations pursuant to MSA (§305(b)(4)(A)) are not necessary. Since NOAA Fisheries is not providing conservation recommendations at this time, no 30-day response from the ARMY is required (MSA §305(b)(4)(B)).

This concludes consultation under the MSA. If the proposed action is modified in a manner that may adversely affect EFH, or if new information becomes available that affects the basis for NOAA Fisheries' EFH conservation recommendations, the Army will need to reinitiate EFH consultation with NOAA Fisheries in accordance with NOAA Fisheries implementing regulations for EFH at 50 CFR 600.920(k).

The efforts by the Army to design this project to minimize environmental impacts are appreciated. If you have any questions, please contact Shandra O'Haleck, of my staff, at (360) 753-9533 or shandra.o'haleck@noaa.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "D. Robert Cohn", written in a cursive style.

D. Robert Cohn
Regional Administrator

cc: Aimee Kinney, COE

Table 1. Species of fishes with designated EFH occurring in Puget Sound.

Groundfish Species	redstripe rockfish <i>S. proriger</i>	Dover sole <i>Microstomus pacificus</i>
spiny dogfish <i>Squalus acanthias</i>	rosethorn rockfish <i>S. helvomaculatus</i>	English sole <i>Parophrys vetulus</i>
big skate <i>Raja binoculata</i>	rosy rockfish <i>S. rosaceus</i>	flathead sole <i>Hippoglossoides elassodon</i>
California skate <i>Raja inornata</i>	rougheye rockfish <i>S. aleutianus</i>	petrale sole <i>Eopsetta jordani</i>
longnose skate <i>Raja rhina</i>	sharpchin rockfish <i>S. zacentrus</i>	rex sole <i>Glyptocephalus zachirus</i>
ratfish <i>Hydrolagus coliei</i>	splitnose rockfish <i>S. diploproa</i>	rock sole <i>Lepidopsetta bilineata</i>
Pacific cod <i>Gadus macrocephalus</i>	striptail rockfish <i>S. saxicola</i>	sand sole <i>Psettichthys melanostictus</i>
Pacific whiting (hake) <i>Merluccius productus</i>	tiger rockfish <i>S. nigrocinctus</i>	starry flounder <i>Platichthys stellatus</i>
black rockfish <i>Sebastes melanops</i>	vermilion rockfish <i>S. miniatus</i>	arrowtooth flounder <i>Atheresthes stomias</i>
bocaccio <i>S. paucispinis</i>	yelloweye rockfish <i>S. ruberrimus</i>	
brown rockfish <i>S. auriculatus</i>	yellowtail rockfish <i>S. flavidus</i>	Coastal Pelagic Species
canary rockfish <i>S. pinniger</i>	shortspine thornyhead <i>Sebastolobus alascanus</i>	anchovy <i>Engraulis mordax</i>
China rockfish <i>S. nebulosus</i>	cabezon <i>Scorpaenichthys marmoratus</i>	Pacific sardine <i>Sardinops sagax</i>
copper rockfish <i>S. caurinus</i>	lingcod <i>Ophiodon elongatus</i>	Pacific mackerel <i>Scomber japonicus</i>
darkblotch rockfish <i>S. crameri</i>	kelp greenling <i>Hexagrammos decagrammus</i>	market squid <i>Loligo opalescens</i>
greenstriped rockfish <i>S. elongatus</i>	sablefish <i>Anoplopoma fimbria</i>	Pacific Salmon Species
Pacific ocean perch <i>S. alutus</i>	Pacific sanddab <i>Citharichthys sordidus</i>	chinook salmon <i>Oncorhynchus tshawytscha</i>
quillback rockfish <i>S. maliger</i>	butter sole <i>Isopsetta isolepis</i>	coho salmon <i>O. kisutch</i>
redbanded rockfish <i>S. babcocki</i>	curlfin sole <i>Pleuronichthys decurrens</i>	Puget Sound pink salmon <i>O. gorbuscha</i>

Kinney, Aimee T NWS

From: Shandra O'Haleck [shandra.o'haleck@noaa.gov]
Sent: Monday, August 30, 2004 7:20 AM
To: Kinney, Aimee T NWS
Cc: Roper, Daniel A NWS; Brunner, Kenneth R NWS
Subject: Re: Pier 23 Piling Replacement and Pier Repair (2004/00848)

Hi Aimee,
NOAA Fisheries has reviewed the changes to the Army Reserve's Pier 23 consultation. To stay as an informal consultation NOAA Fisheries can approve a work window extension until March 1st, not March 15th. Recent fish sampling has shown that PS chinook may be present in the area earlier than previously shown.

It is acceptable to use ACZA treated timber piles for the fender system as long as rub railings are used to protect the aquatic environment from treated wood erosion.

If you have any questions feel free to contact me. If the modifications to the changes are acceptable e-mail me and the changes can be approved by this format.

Shandra O'Haleck

"Kinney, Aimee T NWS" wrote:

Hello Shandra,
Thanks very much for the quick turn-around on the Army Reserve's Pier 23 consultation. There have been two minor changes to the proposed project since the BE was submitted. Neither of these modifications would change our effect determinations for NOAA species. I apologize that we were not able to get you this information before you completed the consultation.

First, we are requesting a work window extension to March 15 due to concerns about a contractor being able to complete the work by mid-February. I believe this is more an issue for USFWS, as the February 15 to March 15 portion of the closure period is primarily for bull trout. But I wanted to check with you to ensure there are no reports of Chinook in Commencement Bay that early.

Second, we would prefer to use ACZA-treated timber pilings rather than untreated timber pilings for the 200 replacement fender pilings. The Army Reserve's initial proposal minimized the amount of treated wood in areas where pilings could be more easily replaced in the future. However, we have since received new information (from USFWS) regarding the longevity of untreated pilings in marine waters. The fender pile replacement frequency would be too short (on the order of two years) if untreated wood were used.

Would you consider the revised project to fall under the existing concurrence letter? Do we need to formally re-initiate consultation? I'm relaying this information via email rather than over the phone so that you have a written record for your files. If you need a formal letter instead, I'll make sure you get one.

If you have any questions or require additional information, please let me know.

9/1/2004

Thanks,
Aimee

~~~~~  
Aimee Kinney  
Environmental Resources Section  
Seattle District Corps of Engineers  
206-764-3634 voice  
206-764-4470 fax  
aimee.t.kinney@usace.army.mil  
[www.nws.usace.army.mil/ers/index.html](http://www.nws.usace.army.mil/ers/index.html)  
~~~~~




STATE OF WASHINGTON

Office of Archaeology and Historic Preservation

1063 S. Capitol Way, Suite 106 • PO Box 48343 • Olympia, Washington 98504-8343 • (360) 586-3065
Fax Number (360) 586-3067 • <http://www.oahp.wa.gov>

April 23, 2004

Mr. Mark Ziminske
Environmental Resources
Seattle District, Corps of Engineers
PO Box 3755
Seattle, Washington 98124-3755

Re: US Army Reserve Pier 23 Project
Log No: 042304-01-COE-S

Dear Mr. Ziminske:

Thank you for contacting our office and providing the professional cultural resources survey by Ronald Kent for the proposed US Army Reserve Pier 23 Project in Tacoma, Pierce County, Washington. We concur with his recommendations and your finding of No Historic Properties Affected.

We would appreciate receiving any correspondence or comments from concerned tribes or other parties that you receive as you consult under the requirements of 36CFR800.4(a)(4).

These comments are based on the information available at the time of this review and on the behalf of the State Historic Preservation Officer in conformance with Section 106 of the National Historic Preservation Act and its implementing regulations 36CFR800. Should additional information become available, our assessment may be revised.

In the event that archaeological or historic materials are discovered during project activities, work in the immediate vicinity should be discontinued, the area secured, and the concerned tribes and this office notified. Thank you for the opportunity to comment and a copy of these comments should be included in subsequent environmental documents.

Sincerely,

Robert G. Whitlam, Ph.D.

State Archaeologist

(360) 586-3080

email: robw@cted.wa.gov

cc: J. Wright

ADMINISTERED BY THE DEPARTMENT OF COMMUNITY, TRADE & ECONOMIC DEVELOPMENT

Appendix D
Draft Finding of No Significant Impact



DEPARTMENT OF THE ARMY
HEADQUARTERS, 70TH REGIONAL READINESS COMMAND
4570 TEXAS WAY WEST
FORT LAWTON, WA 98199-1015

**Pier 23 Repair
Tacoma, Pierce County, Washington**

Draft Finding of No Significant Impact

The 70th Regional Readiness Command (70th) RRC leases 7.4 acres of submerged lands and 3 acres of uplands from the Port of Tacoma. The 70th RRC owns, controls, and has command of the pier structure and its associated facilities, as well as upland structures and improvements on this property. The inner timber portion of Pier 23 was constructed prior to World War II. The outer half of the pier is a concrete surface and piling extension that was added in 1946. The purpose of the proposed action is to allow the 70th RRC to continue mooring and maintaining Army Reserve vessels at Pier 23. The current facilities are deteriorated to the point where they do not meet current operational and safety requirements.

Proposed Action (Preferred Alternative).

The Army Reserve plans to repair the existing pier structure. Up to 530 creosote-treated structural, fender, and bollard piles would be removed and replaced with ammoniacal copper zinc arsenate (ACZA) treated timber piles. Damaged pier decking, stringers, pile caps, and utilities running beneath the pier would also be replaced.

No Action Alternative.

Under the no action alternative, the Army Reserve would not undertake any pier repairs. The deterioration of the pier structure would continue to affect the 70th RRC's usage of the facilities at this site. Limits on vehicle weights and mooring loads would remain, reducing the 70th RRC's ability to carry out vessel maintenance and training activities. The damaged structure and outdated utilities are becoming increasingly unsafe for 70th RRC personnel.

Other Alternatives.

Other alternatives were analyzed to determine which best fit the project need and purpose. The proposed project was limited to the Pier 23 property because other comparable moorage facilities are not available in Puget Sound. Another alternative consisted of demolishing the timber portion of the pier and replacing it with a new concrete-surfaced pier on concrete piling. Under this alternative, approximately 1,100 creosote-treated timber piles would be removed from the wooden section of the pier and replaced with 308 pre-cast concrete piles. This alternative was eliminated from further consideration because it cost more than twice as much as the preferred alternative.

Summary of Impacts.

Pursuant to the National Environmental Policy Act, an Environmental Assessment (EA) has been prepared. This document describes the environmental consequences of the proposed work, which are briefly summarized below. Unavoidable adverse impacts will generally be localized in nature, short in duration, and minor scope. None of these adverse impacts would be significant either individually or cumulatively.

Short-term degradation of water quality will occur due to construction-related sediment disturbance. Turbidity impacts associated with implementation of the proposed project are not expected to be significant because due to the type of equipment which will be used, and the temporary and localized nature of the work. Contaminants are present in sediments at the site, so a dredging elutriate test was performed to estimate the potential for exceedences of State water quality criteria. The test results indicated that there will be no exceedences of acute or chronic criteria at the mixing zone boundary. Since these criteria were developed for the protection of marine organisms, any impacts resulting from exposure to contaminants caused by the repair work would be insignificant.

By removing over 500 creosote-treated piling from the marine environment, the proposed action would remove a chronic source of polycyclic aromatic hydrocarbons (PAH) contamination. However, the replacement of these pilings with ACZA-treated timber would result in some leaching of metals to adjacent sediments. The leaching will occur over a very short period of time (days to weeks) because the reservoir of leachable metals (copper, zinc, chromium, and arsenic) in the wood is depleted quickly. This is because the metals that comprise the treatment process literally become fixed to the wood. Any toxicity associated with the release of metals into the water column is minimized by dilution of receiving waters, and diminishes with the age of the structure. Areas with low flow or turnover and low pH have the greatest potential for adverse impacts; the marine waters of the project site do not exhibit these characteristics. Released metal contaminants will likely be incorporated into adjacent sediments. Metals will not degrade in the long term, but they may become physically sequestered, mineralized, or chemically sequestered, thereby reducing their bioavailability. Impacts associated with the proposed action should not be significant because relative risk associated with ACZA-treated wood (being placed) is less than that of creosote-treated wood (being removed), both temporally and spatially. Implementation of design and construction best management practices, such as placement of rub railings on fender piles and the use of untreated wood wherever possible, will further reduce these risks.

Noise associated with pile driving may affect fish and wildlife present in the project area. Although an increase in ambient noise levels is likely to be the most geographically widespread impact of the proposed action, the size of this increase will be minimized through the use of a vibratory extractor and the likely use of a vibratory hammer. The soft substrates present at the site should also lead to relatively low noise levels. Noise impacts would be temporary. Construction vehicles will increase air emissions in the vicinity of the site; these impacts will be minor in scope, temporary, and localized. The project is not expected to adversely affect threatened or endangered species, and no impacts to cultural resources are anticipated as a result of the construction activities. The National Oceanic and Atmospheric Administration - Fisheries, U.S. Fish and Wildlife Service, and the Washington State Office of Archaeology and Historic Preservation concurred with these affect determinations (Refer to Appendix C of the EA).

Comment Period.

The official comment period for the Environmental Assessment occurred between September 20, 2004 and October 19, 2004.

Point of Contact.

Please send comments, questions, and requests for additional information to:

70th Regional Readiness Command
Public Affairs Office
Attention: MAJ Hillary A. Luton
4570 Texas Way West
Fort Lawton, WA 98199

Email address: hillary.luton@us.army.mil

Finding.

Based on the analysis detailed in the Environmental Assessment (attached), this project is not considered a major Federal action significantly affecting the quality of the human or natural environment and does not require preparation of an environmental impact statement.

Date

LAWRENCE J. JOHNSON
Major General, USAR
Commanding